Amendments to the Specification:

Please amend paragraph **[0004]** as follows:

[0004] Some damaged or diseased lumens, however, have quite complex shapes. For example, the root portion of the aorta is provided with sinuses or bulges that surround the aortic valve, which are called the sinuses of Valsalva. The diameter and orifice area of the aortic root are greater at the vicinity of the sinuses as compared to other portions of the root. With such a complex geometry, implantable grafts matching such complexity have often been made by suturing differently shaped graft components together. For example, U.S. Patent No. 6,352,554 to DePaulis describes a method for forming a graft for the aortic root by suturing a bulbous woven section in between two straight tubular woven sections. Further, the bulbous woven section is also formed cutting or otherwise attaching woven materials. Such techniques are not only costly as numerous textile portions must be sutured to one and the other, but also serve as a potential source for leakage as it is difficult to suture fluid-tight seams among the textile components.

Please amend paragraph **[0011]** as follows:

[0011] Further, the first bulbous end may include a textile portion having an increasing number of warp yarns at the rate of at least three or more warp yarns for every two of the fill yarns and a textile portion having a ~~an~~ decreasing number of warp yarns at the rate of at least three warp yarns or greater for every two of the fill yarns. The bulbous section, which has opposed flat-woven edges, may be formed by threadingly engaging and disengaging the additional warp yarns at the opposed edges. Alternatively, the additional warp yarns may be threadingly engaged at different longitudinal locations along a length of the first bulbous end, and the additional warp yarns may be threadingly disengaged at different longitudinal locations along a length of the second bulbous end. Moreover, the additional warp yarns may be threadingly engaged at different radial locations along a width of the first bulbous end, and the

additional warp yarns may be threadingly disengaged at different radial locations along a width of the second bulbous end.

Please amend paragraph **[0024]** as follows:

[0024] FIG. 6 is a cross-sectional view of ~~the~~ a wall portion of the graft of the present invention depicting its flat-woven shape.

Please amend paragraph **[0028]** as follows:

[0028] FIG. 1 depicts a complex, varied-diameter graft 10 of the present invention. Graft 10 is suitable for replacement of the aortic root, but the present invention is not so limited. Graft 10 includes a first woven tubular section, a varied diameter bulbous woven section and a third woven tubular section 16. Although tubular sections 12 and 14 are depicted ~~a~~ as straight tubular sections, the present invention is not so limited. For example, woven sections 12 and 16 may also have a varied diameter, for example a tapered shape. In weaving graft 10 warp yarns extend along the longitudinal direction of graft 10, which is depicted by vector "L". Fill yarns extend circumferentially or radially as depicted by vector "C". Graft 10 is woven as a single structure, i.e., a flat-woven, seamless, varied-diameter graft.

Please amend paragraph **[0029]** as follows:

[0029] As depicted in FIGS. 2-4, graft 10 is a hollow device with opposed open ends 18 and 20. Tubular section 12 has ~~an~~ a diameter of D_1. Tubular section 16 has a diameter of D_3. The two diameters, i.e., D_1 and D_3, may be the same or may be different. The bulbous section 14 has a varying diameter with its largest diameter represented by D_2. The bulbous diameter D_2 is larger than the tubular diameters D_1 and D_3 of the tubular sections 12 and 16.

Please amend paragraph **[0037]** as follows:

[0037] Further, the first bulbous end may include a textile portion having an increasing number of warp yarns at the rate of at least three or more warp yarns for every two of the fill

yarns and a textile portion having a ~~an~~ decreasing number of warp yarns at the rate of at least three warp yarns or greater for every two of the fill yarns. The bulbous section, which has opposed flat-woven edges, may be formed by threadingly engaging and disengaging the additional warp yarns at the opposed edges. Alternatively, the additional warp yarns may be threadingly engaged at different longitudinal locations along a length of the first bulbous end, [[.]] and the additional warp yarns are threadingly disengaged at different longitudinal locations along a length of the second bulbous end. Moreover, the additional warp yarns may be threadingly engaged at different radial locations along a width of the first bulbous end, and the additional warp yarns may be threadingly disengaged at different radial locations along a width of the second bulbous end.

Please amend paragraph **[0051]** as follows:

[0051] The graft of the present invention can be woven using any known weave pattern in the art, including, simple weaves, basket weaves, twill weaves, velour weaves and the like, and is preferably woven using a double velour tubular weave pattern. Details of double velour patterns are described in U.S. Patent No. 4,517,687 to Liebig et al., the contents of which are incorporated by reference herein. Desirably, the double velour pattern includes a satin weave where a warp yarn crosses over or under at least four fill yarns. The weave patterns may have from about 50-200 warp yarns (ends) per inch per layer and about 30-100 fill yarns (picks) per inch per layer. The wall thickness of the graft may be any conventional useful thickness, for example from about 0.1 mm to about 1.20 mm, desirably from about 0.5 mm to about 0.9 mm.

Please amend paragraph **[0052]** as follows:

[0052] Such a heat setting process is accomplished by first flat-weaving the graft in a tubular form out of a material capable of shrinking during a heat setting process. After the graft is woven, the graft is placed on a mandrel, and heated in an oven at a temperature and time capable of causing the yarns of the graft to heat set to the shape and diameter of the mandrel. Preferably polyester yarns are used as the warp and fill yarns, and the heat setting is

accomplished at time and temperatures appropriate for the material. For example, heat setting can be accomplished at about 190-200° C for a period of about 14-16 minutes. Other methods of heat setting may be employed, for example ultrasonic heat-setting, or through the use of steam as a heating source. One useful method of ultrasonic heat setting is described in U.S. Patent Application No. 10/822,955 titled[[,]] "Ultrasonic Crimping Of A Varied Diameter Graft", ~~Attorney Docket No. 760-184,~~ and filed on April 12, 2004 ~~the same date herewith~~, the contents of which are incorporated herein by reference. After heat setting, the graft can be formed into a shape desired for implantation.

Please amend paragraph **[0053]** as follows:

[0053] The invention being thus described, it will now be evident to those skilled in the art that the same may be varied in many ways. Such variations are not to be regarded as a departure from the spirit and scope of the invention and all such modifications are intended to be included within the scope of the following claims. For example, the woven sections 14 or 16 may be provided with a scalloped or petaled shape[[s]] for facilitating placement to a mechanical or human heart valve. Details of such shaping is further described in U.S. Patent Application No. 10/823,061 titled[[,]] "Tri-Petal Aortic Root Vascular Graft", ~~Attorney Docket No. 760-183,~~ and filed on April 12, 2004 ~~the same date herewith~~, the contents of which are incorporated herein by reference.